

Mole Concept

DPP-04

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| <p>1. Find total number of electrons in 51 g of NH_3? If $^{14}_7\text{N}$ and ^1_1H if Avogadro's No. = N_A</p> <p>(1) $20 N_A$ (2) $30 N_A$
 (3) $10 N_A$ (4) $5 N_A$</p> <p>2. Find total number of neutrons in 56 g of CO? If $^{12}_6\text{C}$ and $^{16}_8\text{O}$ if Avogadro's No. = N_A</p> <p>(1) $28 N_A$ (2) $22 N_A$
 (3) $11 N_A$ (4) None of these</p> <p>3. The volume occupied by 4.4 g of CO_2 at STP is</p> <p>(1) 22.4 L (2) 2.24 L
 (3) 0.224 L (4) 0.1 L</p> <p>4. The total number of protons in 10 g of calcium carbonate is ($N_0 = 6.023 \times 10^{23}$)</p> <p>(1) 1.5057×10^{24}
 (2) 2.0478×10^{24}
 (3) 3.0115×10^{24}
 (4) 4.0956×10^{24}</p> <p>5. A person adds 1.71 gram of sugar ($\text{C}_{12}\text{H}_{22}\text{O}_{11}$) in order to sweeten his tea. The number of carbon atoms added are (mol. mass of sugar = 342)</p> <p>(1) 3.6×10^{22}
 (2) 7.2×10^{21}
 (3) 0.05
 (4) 6.6×10^{22}</p> | <p>6. Which of the following contains the greatest number of atoms?</p> <p>(1) 1.0 g of butane (C_4H_{10})
 (2) 1.0 g of nitrogen (N_2)
 (3) 1.0 g of silver (Ag)
 (4) 1.0 g of water (H_2O)</p> <p>7. The density of water is 1g/mL. What is the volume occupied by 1 molecule of water?</p> <p>(1) 1.44×10^{-23} mL
 (2) 1 mL
 (3) 18 mL
 (4) 2.88×10^{-23} mL</p> <p>8. Find volume of CO_2 (g) at STP if it weighs 88 g? (Atomic mass of C and O are 12g and 32g)</p> <p>(1) 44.8 L (2) 67.2 L
 (3) 22.4 L (4) 89.6 L</p> <p>9. Total number of electrons present in 4.4 g oxalate ion ($\text{C}_2\text{O}_4^{2-}$) is</p> <p>(1) $0.05 N_A$ (2) $2.3 N_A$
 (3) $2.2 N_A$ (4) $2.1 N_A$</p> <p>10. Which has the minimum number of oxygen atoms?</p> <p>(1) 10 mL $\text{H}_2\text{O}(l)$
 (2) 0.1 mole of V_2O_5 (s)
 (3) 12 gm O_3 (g)
 (4) 12.044×10^{22} molecules of CO_2</p> |
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Answer Key

1. (2)
2. (1)
3. (2)
4. (3)
5. (1)

6. (1)
7. (4)
8. (1)
9. (2)
10. (4)



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